

IN THE CLAIMS:

Please cancel Claim 24 and 25, without prejudice or disclaimer of subject matter.

Please amend Claims 20, 23, and 26 as indicated below. Claim 27 is added to more clearly define the scope of the subject matter of the present invention.

Claims 1-19 (canceled).

Claim 20. (Currently Amended) An image processing apparatus comprising:

a read-out unit ~~reading~~ which reads out a photoelectric conversion signal accumulated in a pixel ~~for~~ during a first accumulation duration, wherein the photoelectric conversion signal ~~including~~ includes a first noise component;

an operation unit ~~operating~~ which calculates a noise correction value corresponding to the first noise component ~~on the basis of~~ by using a correction value corresponding to a second noise component accumulated in the pixel ~~for~~ during a second accumulation duration, and by using a correction value corresponding to a third noise component accumulated in the pixel ~~for~~ during a third accumulation duration, ~~and information on the first accumulation duration wherein said noise correction value is calculated on the basis of changes in the first, second and third accumulation durations, and changes between the first, second and third noise components accumulated in the pixel, and wherein the first, second and third accumulation durations are different from each other; and~~

a correction unit correcting the photoelectric conversion signal using the correction value corresponding to the first noise component.

Claim 21. (previously presented): An image processing apparatus according to claim 20, wherein the correction values corresponding respectively to the second and third noise components is obtained in advance.

Claim 22. (previously presented): An image processing apparatus according to claim 20, wherein the correction value corresponding to the second noise component is information on fixed pattern noise of a plurality of the pixels.

Claim 23. (currently amended) An image processing apparatus comprising:

a read-out unit ~~reading~~ which reads out a photoelectric conversion signal accumulated in a pixel ~~for~~ during a first accumulation duration, wherein the photoelectric conversion signal ~~including~~ includes a first noise component;

an operation unit ~~operating a~~ which calculates a noise correction value corresponding to the first noise component ~~on the basis of~~ by using a correction value corresponding to fixed pattern noise of a plurality of ~~the~~ pixels, and by using a correction value corresponding to a second noise component accumulated in the pixel ~~for~~ during a second accumulation duration, ~~and information on the first accumulation duration wherein~~ said noise correction value is calculated on the basis of changes between the first and second accumulation durations, and changes in the first and second noise components

accumulated in the pixel, and wherein the first and second accumulation durations are different from each other; and

a correction unit correcting the photoelectric conversion signal using the correction value corresponding to the first noise component.

Claims 24 and 25 (canceled).

26. (currently amended) An ~~image processing~~ apparatus according to claim 20, further comprising:

~~a read-out unit reading out a photoelectric conversion signal accumulated in a pixel for a first accumulation duration, the photoelectric conversion signal including a first noise component;~~

~~a memory storing a correction value corresponding to fixed pattern noise of a plurality of the pixels, and a correction value corresponding to a second noise component accumulated in the pixel for a second accumulation duration;~~

~~an operation unit operating a correction value corresponding to the first noise component on the basis of the correction value corresponding to the fixed pattern noise stored in said memory, the correction value corresponding to the second noise component stored in said memory, and information on the first accumulation duration;~~

a control unit effecting control so that a focus adjustment operation is started in response to a first operation of an operation button and a photographing operation is performed in response to a second operation of the operation button on the basis of conditions adjusted based on the focus adjustment operation; and

a focus adjustment unit performing the focus adjustment operation on the basis of the photoelectric conversion signal corrected by said correction unit[[,]]

~~wherein the first accumulation duration and the second accumulation duration are different from each other in length thereof.~~

27. (New): An apparatus according to claim 23, further comprising:

a control unit effecting control so that a focus adjustment operation is started in response to a first operation of an operation button and a photographing operation is performed in response to a second operation of the operation button on the basis of conditions adjusted based on the focus adjustment operation; and

a focus adjustment unit performing the focus adjustment operation on the basis of the photoelectric conversion signal corrected by said correction unit.